

MISCELLANEOUS PHENOMENA.

The prevailing winds for May were from the southwest or west in all States in the district, except Mississippi and Florida, where they were respectively from the south and east. The wind movement was fairly high, the average hourly velocities exceeding 10 miles at Norfolk and Cape Henry, Va., Hatteras, N. C., Charleston, S. C., Atlanta and Savannah, Ga., and Pensacola and Sand Key, Fla. Velocities exceeding 40 miles an hour occurred as follows: Norfolk, Va., 62 miles, from the north, on the 30th; Cape Henry, 44 miles, northwest, on the 7th; Atlanta, 60 miles, northwest, on the 31st.

The average number of clear days for the district was 18, partly cloudy 7, cloudy 6, and rainy days 7.

The percentage of sunshine was fairly high at all stations, with a maximum of 84 per cent at Charleston, S. C., and a minimum of 64 per cent at Hatteras, N. C. The average number of hours of sunshine for the district was 318, which is 74 per cent of the possible amount.

SEVERE LOCAL STORMS.

Norfolk, Va.—A severe thunderstorm attended by violent gusts of wind occurred on the evening of May 30. The storm moved from north to south and the wind attained a maximum velocity of 62 miles an hour from the north at 6.12 p. m. Several manufacturing plants were badly damaged and over 60 small buildings in Berkley, South Norfolk, and along the river were more or less injured. The total damage is estimated at \$75,000.

South Carolina.—During the afternoon of May 27 a tornado caused considerable damage at Honea Path, Anderson County, S. C., but no one was killed.

On May 10, during a heavy rain and wind storm near James Island, hailstones as large as partridge eggs were reported to have fallen, causing considerable damage to trucking interests. Four people were drowned by the capsizing of a boat during the squall.

Serious damage to a cotton plantation on Wadmallaw Island resulted from a hailstorm on the 28th in that vicinity.

Georgia.—Atlanta: A severe thunderstorm prevailed on the afternoon of May 31, which seems to have covered a very extended area. The remarkable feature about the storm at Atlanta was the duration of the high wind. For half an hour, from 3.55 to 4.25 p. m., the wind ranged from 50 to 60 miles an hour. Several large plate glass windows were shattered.

Similar severe storms occurred about the same time at West Point and Dublin, Ga. At Dublin lightning set fire to several houses, the largest one being the commissary of the Oconee Cotton Mills, which was burned to the ground; loss, \$2,000. The display of lightning was particularly impressive.

RIVER CONDITIONS.

Moderately high stages occurred in the James River on the 24th and 25th, with crest stages of 23.4 feet at Columbia, Va. (flood stage 18 feet) on the 24th, and of 12.5 feet at Richmond, Va., on the 25th (flood stage 10 feet).

The mean stages of the rivers in North Carolina were below the normal for May. A moderate flood occurred in the Roanoke on the 24th to 27th, the river rising to a maximum stage of 36.2 feet at Weldon, N. C., on the 27th (flood stage 30 feet). Warnings were issued and no damage to property resulted. Estimated loss by suspension of work about \$2,000. Cattle were driven out

of the lowlands without loss, resulting in a saving of about \$5,000.

The rivers in South Carolina, Georgia, and eastern Alabama did not attain flood stages at any point. In the Pedee River a sharp rise beginning on May 24th gave a stage of 22.2 feet at Cheraw, S. C., two days later, and the river continued above normal to the close of the month.

Low stages prevailed in the Tombigbee and Black Warrior Rivers until about May 23, when a rapid rise was reported as a result of the heavy rains that commenced May 21. A crest stage in the Black Warrior River at Tuscaloosa of 45.5 feet occurred at noon on May 24. The stage of the Tombigbee River at Demopolis was 30.8 feet on May 25, when warnings were issued for a rise above the flood stage in about 2 days. The crest stage was 35.4 feet at 5 p. m., May 27. Some of the lowlands on Black Warrior River below Tuscaloosa were flooded, with a probable loss to crops of about \$4,000, and a loss due to the suspension of farm labor of about \$200. A loss estimated at about \$500 was also sustained by the flooding of farms on the Tombigbee River below Demopolis.

The rivers in Mississippi located in district No. 2 were relatively low throughout the month, excepting the Chickasawhay River, which reached flood stage at Enterprise on the 24th and at Shubuta on the 26th, with crest stages of 18.6 and 25 feet, respectively. This together with a moderate rise in the Leaf brought the Pascagoula at Merrill up to 17 feet, or within 3 feet of flood stage on the 29th.

The West Pearl River at Pearl River, La., began to rise near the close of April and reached a stage of 13.8 feet on May 3, or 0.8 feet above flood stage. A second rise occurred on May 27 to 12.3 feet. No material damage resulted from the floods in Chickasawhay or Pearl Rivers.

SEVERE HAILSTORM ON JAMES ISLAND, S. C.

[By J. H. SCOTT, Local Forecaster, Charleston, S. C.]

A hailstorm of more than usual severity, accompanied by heavy thunder and high winds, visited James Island, a few miles south of Charleston, S. C., at about 4 p. m., May 10, 1913. The storm moved from west to east across the center of the island, bearing slightly to the north. The hailstones were small, being described as about the size of partridge eggs, but were sufficiently numerous to cover the ground in places to a depth of 3 or 4 inches. There was very little rain with the hail, and notwithstanding the fact that the afternoon was comparatively warm, it was several hours before all the hailstones were melted. In the region of greatest damage, which was about 1 mile in width and 3 miles in length, both the cotton and the truck crops suffered severely, necessitating replanting in some instances. Young beans were knocked from the vines and the bean leaves were riddled, while cucumber vines were cut in pieces. The plantations of H. H. Ficken, James Frampton, J. A. Lawton, and W. M. Frampton seem to have suffered most. The material damage is overshadowed, however, by the toll of human life taken by the storm. One man and 5 children, all negroes, were fishing from a small boat on the beach front when the storm struck, sweeping the boat rapidly off shore. The occupants, becoming frightened, jumped from the boat, and only 2 of them succeeded in their battle against the waves, the man and 3 children perishing. The father of the drowned children was in Charleston buying food and presents for them, and upon returning home was so stunned by the disaster to his family that fears for his life were entertained.